

# Comparisons of Job Characteristics

**Focus Occupation: Boilermakers (47-2011)**

**Associated Occupation: Heating, Air Conditioning, and Refrigeration Mechanics and Installers (49-9021)**

Compare Knowledge

Compare Skills

Compare Abilities

Compare Detailed Work Activities

Compare Tools and Technologies

<<	Focus occupation element is much lower
<	Focus occupation element is lower
0	Focus occupation element is at a similar level
>	Focus occupation element is at a higher level
>>	Focus occupation element is at a much higher level

## Knowledge

Similarity of Focus Occupation to Associated Occupation: 92

**Focus Occupation: Boilermakers (47-2011)**

**Associated Occupation: Heating, Air Conditioning, and Refrigeration Mechanics and Installers (49-9021)**

Associated Occupation's Key Knowledge Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation
Mechanical	6.8	20.1	17.5	< Expanded education and/or training may be required
Building and Construction	4.0	12.5	13.8	> Current knowledge level is likely sufficient
Physics	4.3	11.4	7.6	<< Extensive education and/or training may be required
Engineering and Technology	5.7	11.1	12.6	> Current knowledge level is likely sufficient
Design	5.2	10.3	11.9	> Current knowledge level is likely sufficient

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

## Skills

Similarity of Focus Occupation to Associated Occupation: 66

**Focus Occupation: Boilermakers (47-2011)**

**Associated Occupation: Heating, Air Conditioning, and Refrigeration Mechanics and Installers (49-9021)**

Associated Occupation's Key Skills Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation
Repairing	3.4	13.5	9.2	<< Extensive development of skills in this area may be required
Troubleshooting	4.5	13.3	9.6	<< Extensive development of skills in this area may be required
Installation	1.7	12.6	3.3	<< Extensive development of skills in this area may be required
Equipment Maintenance	3.5	12.3	9.3	<< Extensive development of skills in this area may be required
Operation Monitoring	6.6	11.4	11.1	0 Current skill level may be sufficient
Quality Control Analysis	5.9	11.2	10.6	0 Current skill level may be sufficient

Operation and Control	5.4	10.9	11.4	0	Current skill level may be sufficient
Equipment Selection	3.3	9.4	8.0	<	A higher skill level may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

Abilities		Similarity of Focus Occupation to Associated Occupation: 87			
Focus Occupation: Boilermakers (47-2011)					
Associated Occupation: Heating, Air Conditioning, and Refrigeration Mechanics and Installers (49-9021)					
Associated Occupation's Key Abilities Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation	
Visualization	7.5	12.4	10.2	<	Some improvement in abilities may be required
Extent Flexibility	4.8	11.8	8.7	<<	Extensive improvement in abilities may be required
Visual Color Discrimination	6.4	10.3	6.0	<<	Extensive improvement in abilities may be required
Hearing Sensitivity	5.6	10.0	7.6	<<	Extensive improvement in abilities may be required
Static Strength	5.0	10.0	8.9	<	Some improvement in abilities may be required
Gross Body Coordination	3.9	7.4	6.2	<	Some improvement in abilities may be required
Gross Body Equilibrium	3.2	7.1	6.6	0	Current ability level may be sufficient

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

Activities that Both Occupations Have in Common		Similarity of Focus Occupation to Associated Occupation: 91
<b>Focus Occupation: Boilermakers (47-2011)</b> <b>Associated Occupation: Heating, Air Conditioning, and Refrigeration Mechanics and Installers (49-9021)</b>		
Work Activities	Exclusivity of Activity	
Adhere to safety procedures	12	
Align or adjust clearances of mechanical components or parts	72	
Apply cleaning solvents	41	
Assemble and install pipe sections, fittings, or plumbing fixtures	71	
Cut, bend, or thread pipe for gas, air, hydraulic, or water lines	84	
Determine installation, service, or repair needed	58	
Determine project methods and procedures	76	
Fabricate sheet metal parts or items	80	
Fabricate, assemble, or disassemble manufactured products by hand	11	
Identify properties of metals for repair or fabrication activities	71	
Inspect machinery or equipment to determine adjustments or repairs needed	42	
Install or replace meters, regulators, or related measuring or control devices	66	

Lay out machining, welding or precision assembly projects	63
Maintain or repair industrial or related equipment/machinery	39
Maintain welding machines or equipment	70
Measure and mark reference points or cutting lines on workpieces	66
Move or fit heavy objects	8
Perform safety inspections in industrial, manufacturing or repair setting	32
Position, align, or level machines, equipment, or structures	74
Pressure test piping system or equipment for leaks	89
Read blueprints	10
Read specifications	23
Read technical drawings	7
Repair or adjust measuring or control devices	71
Repair or replace gas, steam, sewer, or water piping or fixtures	82
Repair or replace malfunctioning or worn mechanical components	62
Test mechanical products or equipment	56
Understand technical operating, service or repair manuals	6
Use acetylene welding/cutting torch	54
Use arc welding equipment	62
Use basic plumbing techniques	72
Use combination welding procedures	68
Use hand or power tools	2
Use pipe fitting equipment	80
Use precision measuring devices in mechanical repair work	61
Use pressure gauges	76
Weld together metal parts, components, or structures	54

Not all positions in these occupations will necessarily perform all of the listed activities. The exclusivity rating is an indication of how unique the activity is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations engage in that activity.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

## Tools and Technologies that Both Occupations Have in Common

Similarity of Focus  
Occupation to Associated  
Occupation: 82

**Focus Occupation: Boilermakers (47-2011)**

**Associated Occupation: Heating, Air Conditioning, and Refrigeration Mechanics and Installers (49-9021)**

Tools and Technologies	Exclusivity
Aerial lifts	13
Business function specific software	1
Compressors	9
Computers	1
Content authoring and editing software	1
Cutting and crimping and punching tools	3
Cutting tools	18
Dispensing tools	6
Drafting supplies	9
Face and head protection	7
Fall protection	16

Forming tools	2
Gas analyzers and monitors	10
Holding and clamping tools	3
Indicating and recording instruments	2
Industry specific software	1
Ladders and scaffolding	6
Length and thickness and distance measuring instruments	2
Lifting equipment and accessories	3
Light and wave generating and measuring equipment	4
Machine tools	7
Marking tools	11
Measuring and layout tools	3
Metal bending and forming machinery	17
Non destructive examination equipment	13
Personal communication devices	2
Power tools	2
Pressure measuring and control instruments	10
Prying and bending tools	10
Respiratory protection	6
Rough and finishing tools	5
Safety apparel	4
Sampling equipment	12
Sealing tools	21
Soldering and brazing and welding machinery and supplies	6
Special tooling fixtures	16
Viewing and observing instruments and accessories	4
Vision protection and accessories	3
Wrenches and drivers	2

Not all positions in these occupations will necessarily use all of the listed tools and technologies. The exclusivity rating is an indication of how unique the tool or technology is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations use that tool or technology.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.